

# Low vitamin D, smoking predict worse cognitive function in MS

April 29 2020

---



(HealthDay)—For multiple sclerosis (MS) patients with clinically

isolated syndrome, lower vitamin D and smoking predict worse long-term cognitive function and neuronal integrity, according to a study published online April 16 in *Neurology*.

Marianna Cortese, M.D., Ph.D., from the University of Bergen in Norway, and colleagues conducted a study involving 278 patients with clinically isolated syndrome who participated in a clinical trial and completed an 11-year follow-up assessment. At baseline and six, 12, and 24 months, serum 25-hydroxyvitamin-D (25[OH]D), cotinine, and anti-Epstein-Barr virus nuclear antigen 1 (EBNA-1) immunoglobulin G (IgG) were assessed; the correlations between these biomarkers and Paced Auditory Serial Addition Test (PASAT)-3 scores and serum neurofilament light chain (NfL) concentrations were assessed at 11 years.

The researchers found that higher vitamin D predicted better cognitive performance while smoking predicted worse performance. A 50-nmol/L higher mean 25(OH)D in the first two years correlated with reduced odds of poorer PASAT performance at year 11 (multivariable odds ratio, 0.35). Smokers and [heavy smokers](#) had lower standardized PASAT scores compared with nonsmokers ( $P_{\text{trend}} = 0.026$ ). There was no correlation between baseline anti-EBNA-1 IgG levels and cognitive performance ( $P_{\text{trend}} = 0.88$ ). These findings were corroborated in associations with NfL concentrations at year 11.

"These results suggest that correcting vitamin D insufficiency and abstaining from cigarette smoking after clinical MS onset might protect long-term cognitive function and CNS (central nervous system) integrity," the authors write.

Two authors disclosed ties to Bayer.

**More information:** [Abstract/Full Text \(subscription or payment may](#)

[be required](#))

Copyright © 2020 [HealthDay](#). All rights reserved.

Citation: Low vitamin D, smoking predict worse cognitive function in MS (2020, April 29)  
retrieved 29 June 2024 from <https://medicalxpress.com/news/2020-04-vitamin-d-worse-cognitive-function.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.